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EXAMINER

LIVERSEDGE, JENNIFER L

ART UNIT	PAPER NUMBER
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3692

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/801,583

Applicant(s)

KEITH, CHRISTOPHER

Examiner

Jennifer Liversedge

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-16,18-33,35-40 and 42-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-16,18-33,35-40 and 42-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/4/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office Action is responsive to Applicant's amendment and request for reconsideration of application 09/801,583 filed on September 4, 2007.

The amendment contains original claims: 2-5, 9-10, 13-16 and 18-26.

The amendment contains previously presented claims: 7-8, 27-28, 30-31, 36-38.

The amendment contains amended claims: 1, 11-12, 29, 32-33, 35, 39-40, 42-46.

Claims 6, 17, 34, 41 have been canceled.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 4, 2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5, 7-16, 18-27, 30, 33, 35-37, 40, 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,101,353 to Lupien et al. (further referred to as Lupien), and further in view of US Patent 6,343,278 B1 to Jain et al. (further referred to as Jain).

Regarding claim 1, Lupien discloses a method of facilitating trading among a set of processes having respective owners, comprising:

automatically via a computer (see Fig 1), operating at least one of the processes (see column 5, lines 51-53 and Fig 7) according to an order processing methodology by retrieving a decision table having at least two rules specifying at least one of a discovery strategy and an order handling strategy, each rule having at least one condition and at least one action to be taken when the condition is satisfied (see column 3, lines 43-45 and column 6, lines 24-26 and lines 37-45; column 10, line 9 – column 11, line 9), wherein the decision table further includes a holding tank capable of storing a plurality of orders that have been generated but not yet submitted for execution at a

market (Figures 7-8; column 3, lines 7-31; column 7, lines 15-26 and 39-50; column 11, lines 11-20, 34-37 and 66-68; column 12, lines 58-66), and

automatically evaluating whether the at least one condition for each of the rules is satisfied, and for each of the rules having a satisfied condition, automatically, via a computer, configuring the at least one process to act on the at least one action (column 3, lines 7-14 and lines 23-45; column 6, lines 15-26 and lines 37-45; column 10, lines 24-68 and column 11, lines 1-10; column 11, lines 38-44; column 12, lines 26-32, lines 48-51 and lines 53-66),

wherein at least one action of at least one rule in the decision table is to store an order in the holding tank (Figures 7-8; column 3, lines 7-14, lines 23-36 and lines 43-45; column 6, lines 22-26, lines 37-45; column 7, lines 15-50; column 10, lines 1-23; column 10, line 61 – column 11, line 20; column 11, lines 66-68; column 12, lines 26-66).

Lupien does not specifically disclose the holding tank having one or more market-related conditions associated therewith, the method further comprising monitoring the one or more conditions of the holding tank and when the one or more conditions are met, removing the orders from the holding tank and taking at least one specified action with respect to each of the removed orders.

However, Lupien discloses orders having one or more market-related conditions associated therewith, the method further comprising monitoring the one or more conditions of the orders in the holding tank and when the one or more conditions are met, removing the orders from the holding tank and taking at least one specified action with respect to each of the removed orders (Figures 7-8; column 3, lines 7-14, lines 23-

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36 and lines 43-45; column 4, lines 32-36; column 6, lines 20-45; column 7, lines 15-50; column 9, lines 43-54; column 10, lines 1-68; column 11, lines 1-20; column 11, lines 66-68; column 12, lines 26-68).

Further, Jain discloses where a group of orders may subject to a common order limit where multiple orders can be submitted as a group and wherein the multiple orders are subject to the one price (column 2, lines 1-8; column 8, line 54 – column 9, line 27).

It would be obvious to one of ordinary skill in the art at the time of the invention to modify the release of individual orders from a holding tank subject to conditions as disclosed by Lupien to adapt the practice of defining a single condition for the release of multiple orders as disclosed by Jain. The motivation would be to provide efficiency of trading, whereby multiple orders are executed subject to a single defining condition. The operations of generating orders, holding orders, and then releasing the orders subject to defined conditions are all known practices, taught whereby conditions apply to individual orders by Lupien and whereby conditions apply to groups of orders as disclosed by Jain. One of ordinary skill in the art would be motivated to use both known practices.

Regarding claim 12, Lupien discloses a method of facilitating trading, comprising:

Automatically, via a computer (Fig 1), retrieving, at an order handling process operated on behalf of a process owner that is one of a plurality of process owners (see column 5, lines 51-53 and Fig 7), a decision table representing an order processing methodology, the decision table having at least two rules specifying at least one of a

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discovery strategy and an order handling strategy (see column 3, lines 43-45 and column 6, lines 41-45), each rule having at least one condition and at least one action to be taken when the condition is satisfied (column 3, lines 7-14 and lines 23-45; column 6, lines 15-26 and lines 37-45; column 10, lines 24-68 and column 11, lines 1-10; column 11, lines 38-44; column 12, lines 26-32, lines 48-51 and lines 53-66), wherein the decision table further includes a holding tank capable of storing a plurality of orders that have been generated but not yet submitted for execution at a market (Figures 7-8; column 3, lines 7-31; column 7, lines 15-26 and 39-50; column 11, lines 11-20, 34-37 and 66-68; column 12, lines 58-66), and

automatically, via a computer, applying, at the order handling process, the decision table to process an order when a specified event occurs (column 3, lines 7-14 and lines 23-45; column 6, lines 15-26 and lines 37-45; column 10, lines 24-68 and column 11, lines 1-10; column 11, lines 38-44; column 12, lines 26-32, lines 48-51 and lines 53-66),

wherein at least one action of at least one rule in the decision table is to store an order in the holding tank (Figures 7-8; column 3, lines 7-14, lines 23-36 and lines 43-45; column 6, lines 22-26, lines 37-45; column 7, lines 15-50; column 10, lines 1-23; column 10, line 61 – column 11. line 20; column 11, lines 66-68; column 12, lines 26-66).

Lupien does not specifically disclose the holding tank having one or more conditions associated therewith, the method further comprising monitoring the one or more conditions of the holding tank and when the one or more conditions are met,

removing the orders from the holding tank and taking at least one specified action with respect to each of the removed orders.

However, the same logic and arguments made for claim 1, however, apply to claim 12 regarding this limitation.

Regarding claim 33, Lupien discloses a system for facilitating trading, comprising:

a computer having a processing component (see Fig 1), wherein the processing component is configured to process an order by retrieving a decision table having rules that specify at least one condition and at least one action to be taken when the at least one condition is satisfied (see column 3, lines 43-45 and column 6, lines 24-26 and lines 37-45; column 10, line 9 – column 11, line 9), wherein the decision table further includes a holding tank capable of storing a plurality of orders that have been generated but not yet submitted for execution at a market (Figures 7-8; column 3, lines 7-31; column 7, lines 15-26 and 39-50; column 11, lines 11-20, 34-37 and 66-68; column 12, lines 58-66), and

wherein at least one action of at least one rule in the decision table is to store an order in the holding tank (Figures 7-8; column 3, lines 7-14, lines 23-36 and lines 43-45; column 6, lines 22-26, lines 37-45; column 7, lines 15-50; column 10, lines 1-23; column 10, line 61 – column 11, line 20; column 11, lines 66-68; column 12, lines 26-66).

Lupien does not specifically disclose the holding tank having one or more conditions associated therewith, the method further comprising monitoring the one or

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more conditions of the holding tank and when the one or more conditions are met, removing the orders from the holding tank and taking at least one specified action with respect to each of the removed orders.

However, the same logic and arguments made for claim 1, however, apply to claim 33 regarding this limitation.

Regarding claim 40, Lupien discloses a computer-accessible medium having executable instructions stored thereon for facilitating trading, wherein the instructions, when executed, cause a computer to:

Process an order in accordance with a decision table, wherein the decision table has rules that specify at least one condition and at least one action to be taken when the at least one condition is satisfied (see column 3, lines 43-45 and column 6, lines 24-26 and lines 37-45; column 10, line 9 – column 11, line 9), wherein the decision table further includes a holding tank capable of storing a plurality of orders that have been generated but not yet submitted for execution at a market (Figures 7-8; column 3, lines 7-31; column 7, lines 15-26 and 39-50; column 11, lines 11-20, 34-37 and 66-68; column 12, lines 58-66), and wherein at least one action of the at least one rule in the decision table is to store an order in the holding tank (column 3, lines 7-14 and lines 23-45; column 4, lines 32-36; column 6, lines 20-40; column 7, lines 15-50; column 9, lines 43-54; column 10, lines 24-68 and column 11, lines 1-68; column 12, lines 53-68).

Lupien does not specifically disclose the holding tank having one or more conditions associated therewith, the method further comprising monitoring the one or

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more conditions of the holding tank and when the one or more conditions are met, removing the orders from the holding tank and taking at least one specified action with respect to each of the removed orders.

However, the same logic and arguments made for claim 1, however, apply to claim 40 regarding this limitation.

Regarding claims 2 and 13, Lupien further discloses that wherein the at least one process is a trading process (i.e. buy and sell, see abstract).

Regarding claims 3 and 14, Lupien further discloses that wherein the at least one process is a market process (i.e. price fluctuation upward or downward, see abstract).

Regarding claims 4 and 15, Lupien further discloses that wherein the at least one condition is based on order characteristics (i.e. the basic investment characteristics, see column 4, lines 60-65).

Regarding claims 5 and 16, Lupien further discloses that wherein the at least one condition is based on market characteristics (i.e. the fundamental investment characteristics, see column 5, lines 15-17 and column 10, lines 24-68 and column 11, lines 1-10).

Regarding claim 7, Lupien further discloses wherein the at least one action that the at least one process is configured to act upon includes assigning a value to a parameter (i.e. size, order, limit, see Fig 4).

Regarding claim 8, Lupien further discloses wherein the at least one action that the at least one process is configured to act upon includes transferring to another rule (see column 3, lines 28-45; column 6, lines 53-59; column 10, line 61 - column 11, line 10; column 12, lines 26-53).

Regarding claim 9, Lupien further discloses that wherein at least one of the rules also specifies a time for acting on its at least one action (see column 10, lines 1-7; column 12, lines 53-68).

Regarding claim 10, Lupien further discloses that wherein the at least one action in at least one of the rules is a wait operation (i.e. based on the market fluctuation, see claim 10; see column 3, lines 7-14 and lines 23-45; column 4, lines 32-36; column 6, lines 20-40; column 9, lines 43-54; column 10, lines 24-68 and column 11, lines 1-10; column 12, lines 53-68).

Regarding claim 11, Lupien further discloses that wherein the set of processes includes at least two market processes (i.e. price fluctuation upward or downward, see claim 10) and at least two trading processes (i.e. buy and sell, see abstract) and is

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operative on a platform that enables the trading processes to communicate in a standardized manner (see abstract).

Regarding claim 18, Lupien further discloses that wherein the decision table includes, in at least one of a condition and an action of at least one of the rules, a nested decision table (see abstract and see column 3, lines 43-45; column 6, lines 15-45 and lines 53-59; column 10, lines 24-68; column 12, lines 53-66).

Regarding claim 19, Lupien further discloses that wherein the rules define a sequence of actions to be taken using explicit control instructions (see column 3, lines 43-45; column 6, lines 15-45 and lines 53-59; column 10, lines 24-68 and column 11, lines 1-10; column 12, lines 53-66).

Regarding claim 20, Lupien further discloses that wherein the at least one action is to request information from an order room (i.e. registered broker/dealer, see column 11, lines 38-42).

Regarding claim 21, Lupien further discloses that wherein the at least one action is to transfer to another rule (see column 3, lines 28-34; column 10, line 61 – column 11, line 10; column 12, lines 26-52).

Regarding claim 22, Lupien further discloses that wherein the specified event is receiving of an order (see column 3, lines 28-34; column 4, lines 32-36).

Regarding claim 23, Lupien further discloses that wherein the specified event is completing price discovery (see Fig 4; column 9, lines 43-54; column 12, lines 26-66; column 4, lines 32-36).

Regarding claim 24, Lupien further discloses that wherein the specified event is receiving a bid or offer relating to an order handled by the order handling process (see Fig 4; column 9, lines 43-54; column 12, lines 26-66; column 4, lines 32-36).

Regarding claim 25, Lupien further discloses that wherein the specified event is receiving notice of a price improvement opportunity (see column 3, lines 28-34; column 9, lines 43-54; column 12, lines 26-66; column 4, lines 32-36).

Regarding claim 26, Lupien further discloses that wherein the specified event is reporting execution of an order (see column 3, lines 28-34; column 9, lines 43-54; column 12, lines 26-66; column 4, lines 32-36).

Regarding claims 27 and 30, Lupien discloses wherein the at least one action is selected by the owner of the process from the group comprising (i) generating an order, (ii) obtaining more information, and (iii) evaluating another rule in the decision table

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(column 3, lines 7-14 and lines 23-45; column 4, lines 31-36; column 6, lines 2-68; column 7, lines 15-26 and lines 39-43; column 9, lines 7-11 and lines 43-55; column 10, lines 1-8; column 10, line 61 – column 11, line 20; column 11, lines 34-37 and lines 66-68; column 12, lines 26-32, lines 48-51 and lines 58-61).

Regarding claims 35 and 42, Lupien discloses wherein the one or more conditions of the holding tank further includes a period of time, and wherein the holding tank is configured to store the orders until the period of time has elapsed (see column 10, lines 1-7; column 12, lines 53-68).

Regarding claims 36-37 and 43-44, Lupien discloses a market for trading between two or more processes operating via the computer, and wherein the one or more conditions of the holding tank is a condition internal to the market (column 3, lines 7-14 and lines 23-45; column 4, lines 32-36; column 6, lines 20-40; column 7, lines 15-50; column 9, lines 43-54; column 10, lines 24-68; column 11, lines 1-20; column 12, lines 26-68) and external to the market (column 3, lines 23-28; column 4, lines 61-65; column 6, lines 24-26 and lines 37-45; column 7, lines 15-50; column 10, lines 1-27; column 11, lines 11-20; column 12, lines 26-68).

Claims 28-29, 31-32, 38-39 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupien and Jain as applied to claims 1 and 12 above, and further in view of US Patent 6,377,940 B2 to Tilfors et al. (further referred to as Tilfers).

Lupien does not disclose a plurality of holding tanks wherein one or more market-related conditions associated with each holding tank are separate from the one or more market-related conditions associated with other holding tanks in the plurality of holding tanks.

However, the combination of Lupien and Jain where a holding tank for multiple orders (Lupien) has associated therewith market-related conditions associated with the group of orders (Jain) has been established for independent claims 1, 12, 33 and 40.

Additionally, Tilfors discloses a plurality of holding tanks wherein one or more conditions associated with each holding tank are separate from the one or more conditions associated with other holding tanks in the plurality of holding tanks (Abstract, Figures 1-2; column 2, line 47 – column 3, line 56). It would be obvious to one of ordinary skill in the art to adapt the use of multiple holding tanks as disclosed by Tilfors with the use of a holding tank for trading as disclosed by Lupien and Jain. The motivation would be to include multiple sources and means of control from which orders can be stored upon generation and wait for execution, such as perhaps a holding tank for trades related to fortune 500 companies, a holding tank for trades with time limits, a holding tanks for various types of investors, etc.

Response to Arguments

Applicant argues that Lupien does not teach using a decision table, wherein the decision table includes a holding tank, where orders are generated and held in the holding tank and not submitted for execution at a market. Applicant also argues that

while Lupien discloses holding the orders internally, this constitutes execution on a market.

As in the in-person interview conducted at the USPTO, Examiner again points to certain specific sections of Lupien that read on the limitations of the claims in the present application. The claim language involves generating an order and holding it in a holding tank prior to releasing it for execution on a market. With reference to Figure 7, step 40 indicates generating an order. The order is then held through step 42 which allows for order alteration. The order is then held while an internal order match is conducted in step 44. Not until step 46 is the order released to an external market. Additionally, given that Lupien provides for conditionally executing orders, the orders are held until conditions are met for prompting execution, those conditions identified and specified in a decision table. Orders are generated and Lupien specifically discloses where orders that remain unexecuted are subject to cancellation or alteration by either the system or manually by a client (column 11, lines 66-68).

As discussed in the rejection above, Lupien discloses where conditions for execution are based on single orders. However, Jain discloses where orders are bundled together and submitted as a group wherein the entire group is subject to one condition for execution. This practice is old and well known. Grouping of transactions are known, for efficiency in submitting transactions in batches rather than operating in a continual "one-off" state. Particularly prior to electronic means of conducting transactions, it was not feasible to conduct individual transactions. It is known to submit transactions daily, twice a day, hourly, etc. Further, grouping by condition is also known

for efficiency. Grouping all orders for buying or selling a particular stock when it reaches a particular price simply is an efficient way of conducting business.

The generating of orders is old and well known. Holding generated orders until a condition for execution is met is old and well known. Grouping of orders into bundles is old and well known. Holding a plurality of orders contingent on differing conditions is old and well known. Whether by design or by system/technological limitations or by savvy trading practices, generating orders but not submitting them for execution until certain conditions are met is old and well known. Manners and mechanisms for avoiding discovery of orders is old and well known.

The Courts have stated that "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *KSR Int'l Co. v. Teleflex, Inc.* 127 S. Ct. 1727, 1740, 92 USPQ2d 1385, 1396 (2007). In the instant case, the cited prior art references were available in the field at the time of the purported invention. The Applicant merely implemented a predictable variation of these existing methods in establishing his/her own invention. Such predicatability is based upon the fact that each incorporated method performs the same function and provides the same utility as originally intended in their pre-combination state.

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Conclusion

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached at 571-272-6702. The fax number for the organization where the application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Liversedge

Examiner

Art Unit 3692

Kambiz Abdi



Supervisory Patent Examiner

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